AMENDMENTS TO THE CLAIMS

Please amend the claims as follow. Insertions are shown underlined while deletions are ~~struck through~~ or [[double-bracketed]].

1-4(Canceled)

5 (Currently amended): A liquid injector according to claim [[1]] 22, further comprising:

coefficient storing means for registering data of predetermined coefficients assigned to respective regions to be imaged of the subject;

data entering means for accepting entered data of a region to be imaged of the subject;

coefficient reading means for reading the data of one of the coefficients from said coefficient storing means depending on the region to be imaged of the subject whose data has been entered by said data entering means; and

total calculating means for calculating said total amount of the contrast medium to be injected into the subject based on the coefficient whose data has been read by said coefficient reading means.

6 (Currently amended): A liquid injector according to claim [[1]] 22, wherein said contrast medium is available in a plurality of types having different concentrations of an effective component contained therein, further comprising:

concentration storing means for registering data of the different concentrations in the types of said contrast medium;

data entering means for accepting entered data of a type of the contrast medium;

concentration reading means for reading data of the concentration from said concentration storing means depending on the type of the contrast medium whose data has been entered by said data entering means; and

total calculating means for calculating said total amount of the contrast medium to be injected into the subject based on said concentration whose data has been read by said concentration reading means.

7 (Currently amended): A liquid injector according to claim [[1]] 22, wherein said contrast medium is available in a plurality of types having different concentrations of an effective component contained therein, further comprising:

concentration storing means for registering data of the different concentrations in the types of said contrast medium;

coefficient storing means for registering data of predetermined coefficients assigned to respective regions to be imaged of the subject;

data entering means for accepting entered data of a body weight of the subject, a region to be imaged of the subject, and one of the types of the contrast medium;

concentration reading means for reading data of the concentration from said concentration storing means depending on the type of the contrast medium whose data has been entered by said data entering means;

coefficient reading means for reading the data of one of the coefficients from said coefficient storing means depending on the region to be imaged of the subject whose data has been entered by said data entering means; and

total calculating means for calculating said total amount of the contrast medium to be injected into the subject based on said body weight obtained by said data entering means, said concentration obtained by said concentration reading means, and said coefficient obtained by said coefficient reading means.

8 - 21 (Canceled)

22 (New): A liquid injector for injecting a contrast medium into a subject whose fluoroscopic image is to be captured by an imaging diagnostic apparatus, comprising:

a liquid injection mechanism for injecting said contrast medium into said subject;

a data storing means for registering data of a base operation-condition, including (i) data of a variable pattern comprised of a liner decrease of injection rate of the contrast medium from the start of injection to a set point of time, and from said point of time a constant or linear increase of the injection rate of the contrast medium and (ii) data of a predetermined injection time for an injection;

a rate control means for controlling operation of said liquid injection mechanism;

wherein said rate control means is configured to

(a) read out the base operation-condition from the data storing means,

(b) calculate a total volume of the contrast medium to be injected, based on data of necessary dose of effective component per unit weight, data of subject's weight, and data of concentration of the effective component,

(c) make an injection pattern based on the base operation-condition and the calculated total volume of the contrast medium, by moving a waveform of the variable pattern vertically depending on the total volume with said predetermined injection time unchanged, so that the area surrounded by the waveform will be correspond to the volume of contrast medium, and

(d) perform an injection in accordance with said injection pattern.

23 (New): A method for injection a contrast medium into a subject whose fluoroscopic image is to be captured by an imaging diagnostic apparatus, comprising:

registering data of a base operation-condition, including (i) data of a variable pattern comprised of a linear decrease of injection rate of contrast medium from start of the injection to a set point of time, and from said point of time a constant or linear increase of the injection rate of the contrast medium and (ii) data of a predetermined injection time for an injection;

controlling operation of said liquid injection so as to;

(a) read out the base operation-condition,

(b) calculate a total volume of the contrast medium to be injected, based on data of necessary dose of effective component per unit weight, data of subject's weight, and data of concentration of the effective component,

(c) make an injection pattern based on the base operation-condition and the calculated total volume of the contrast medium, by moving a waveform of the variable pattern vertically depending on the total volume with said predetermined injection time unchanged, so that the area surrounded by the waveform will correspond to the volume of contrast medium, and

(d) perform an injection in accordance with said injection pattern.

24 (New): A method according to claim 23, further comprising:

registering data of predetermined coefficients assigned to respective regions to be imaged of the subject;

accepting entered data of a region to be imaged of the subject;

reading the data of one of the coefficients depending on the region to be imaged of the subject whose data has been entered; and

calculating said total amount of the contrast medium to be injected into the subject based on the coefficient whose data has been read.

25 (new): A method according to claim 23, wherein said contrast medium is available in a plurality of types having different concentrations of an effective component contained therein, further comprising:

registering data of the different concentrations in the types of said contrast medium;

accepting entered data of a type of the contrast medium;

reading data of the concentration depending on the type of the contrast medium whose data has been entered; and

calculating said total amount of the contrast medium to be injected into the subject based on said concentration whose data has been read.

26 (New): A method according to claim 23, wherein said contrast medium is available in a plurality of types having different concentrations of an effective component contained therein, further comprising:

registering data of the different concentrations in the types of said contrast medium;

registering data of predetermined coefficients assigned to respective regions to be imaged of the subject;

accepting entered data of a body weight of the subject, a region to be imaged of the subject, and one of the types of the contrast medium;

reading data of the concentration depending on the type of the contrast medium whose data has been entered;

reading the data of one of the coefficients depending on the region to be imaged of the subject whose data has been entered; and

calculating said total amount of the contrast medium to be injected into the subject based on said body weight obtained, said concentration, and said coefficient.